

The perceptions and expectations for rehabilitation and return to work, in orthopaedic road trauma victims: a qualitative study in north Queensland

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Abstract

Purpose. Road traffic accidents (RTAs) are regular occurrences on Australia's roads, however from the literature it would seem that with increasing remoteness from urban centres, the frequency of RTAs also increases. Therefore the purpose of this study was to examine in-depth the perceptions and expectations orthopaedic inpatients have from their rehabilitation, with respect to their return to work prospects, following a rural/remote road traffic accident (RTA).

Method. Six face-to-face patient interviews were carried out within the Townsville General Hospital. All participants had been involved in an RTA within the catchment area of the Townsville General Hospital, which resulted in orthopaedic trauma requiring rehabilitation. Each interview was carried out by the principal researcher, and guided by a set of pre-determined semi-structured questions. Participants were encouraged to talk about their personal experiences and thoughts during the interview. Transcribed data was organised into a series of matrices from which five common themes were derived.

Results. Whilst the need for medical attention was recognised, the majority of participants questioned the necessity for rehabilitation and believed there were no barriers preventing a timely return to work. As a result, patients appeared to lack knowledge about the roles physiotherapists fulfil as part of the multidisciplinary team and more importantly possible return to work pathways.

Conclusion. The area of rehabilitation after a traumatic life event is complex and highly influenced by the crash the site itself, the characteristics of the patient and their occupation, amount of patient education, as well as the degree of physical and psychological trauma the patient has sustained. From this study it is evident that physiotherapists and other health care workers must ensure that patients are well educated and informed regarding their condition and the purpose of each treatment to improve patient compliance and thus, recovery. The value of patient centred care is paramount especially during the difficult times the rehabilitation period imposes upon an individual.

Introduction

Road traffic accidents (RTAs) are frequent occurrences on North Queensland roads [1]. In a recent four (4) year period, (1998 to 2002) there were 1199 RTAs in the combined areas of the Townsville and Thuringowa catchments alone [2]. The full effect of these 1199 crashes can be seen not only through the total number of hospitalisations in the Townsville-Thuringowa region (35.1%) but also the loss of \$252.18 million to the North Queensland community [2]. Recent statistics for the Townsville-Thuringowa catchments indicate that 337 people were killed in RTAs in 2006, making the northern region the highest contributor to Queensland's road toll [3].

Worryingly, the frequency of RTAs in North Queensland appears to be increasing, making the cost of injury and subsequent considerations of rehabilitation programs more important than ever. Physiotherapy

professionals can provide vital support and improve recovery outcomes through their involvement in rehabilitation programs that aim to assist clients to come to an understanding of their injury status as well as the impact their injury and pain experience may have upon their work and occupational identity [4–5]. This project aimed to examine in depth the perceptions and expectations orthopaedic clients have from their rehabilitation and return to work. This project was planned as a pilot study for further work in the area of RTA victims and return to work pathways.

Methodology

The rationale for selecting a qualitative research approach for this study was based upon the importance of achieving a personal story relating to the patients' experience and to hear the 'truth' of their situation [6]. This study made use of a naturalistic paradigm by applying a phenomenological design [7]. This approach allowed in-depth information regarding personal experience to be obtained which is not possible to achieve through the use of a survey, quasi or experimental design [6]. Therefore, phenomenology was the best design with a qualitative methodology for this study, because the purpose of the study which is to examine in-depth the perceptions and expectations orthopaedic clients have from their rehabilitation and return to work, dictates that phenomenology is required in order to 'make sense' of the complex and unstructured data [7]. By adopting this approach, new understandings regarding RTA victim's perceptions and experiences with respect to work and injury status may be recognised.

By using semi structured interviews the researcher was able to promote and capitalise on the sharing of personal experiences in a safe environment and also view the body language, expressions and emotions of the client. The use of a set of open ended questions aimed to allow the participants the freedom to convey their perspectives whilst the researcher remained in subtle control of the interview and prompted where necessary. In the case of this study there is adequate evidence within the area of RTAs to create set questions prior to the interview [7]. This type of method allows the researcher to frame the discussion in advance in order to cover the areas required to answer the research question and fulfil the purpose of the study [7].

Method

This study was approved by the Townsville Health Service District Institutional Ethics Committee on the 12/12/07 and the James Cook University Human Research Ethics Committee on the 03/01/08. This study did not set out to reflect or comment on the services and care provided by the physiotherapists or other medical staff at the Townsville Hospital; furthermore no participants or clinicians were identified by the study. Participants were recruited through the health service and access was granted to view patient records in order to obtain specific details regarding injuries and operations. The study had no clinical intervention with clients.

Inclusion/Exclusion criteria

Eligible participants were those patients who had sustained major orthopaedic trauma from an RTA. All participants were inpatients of the Townsville General Hospital. Outpatients were excluded from this study. All participants were over 18 years of age, employed prior to the RTA, spoke English fluently, and were medically and emotionally stable. Clients who were deemed to be suffering a high degree of psychological distress or had a diagnosed mental illness were excluded from the study, as were those clients who were not fluent in English. In addition patients who had sustained head, spinal or neurological injuries were not included. There are numerous publications available on the care of the named client groups [8–10]. This study looked only at patients with orthopaedic trauma.

Recruitment

Recruitment was carried out through the Townsville General Hospital via a nominated physiotherapy staff member. Participation in this study was voluntary and invitation to participate was by way of direct contact in the hospital by the nominated physiotherapy staff member. This staff member was fully briefed on the inclusion/exclusion criteria allowing them to identify those patients that fulfilled the necessary criteria. The principal researcher approached the participants, after informed consent, which included permission to audiotape the interview had been obtained by the nominated staff member. Recruitment took place over a one month period in 2008.

Procedure

Each participant was reassured that they would not be identified in the recordings or documentation within the study prior to the interview taking place. Participants were also informed that if in the process of the interview they became distressed the interview would be ceased and counselling services within the hospital would be sought. Prior to the interview each participant was provided with an information sheet which contained statistics about RTAs and the relevance of research in this area. Preceding the data collection phase, to ensure quality of data, a preliminary interview was undertaken with a potential participant. This preliminary interview allowed the researcher to select and modify the interview questions. This trial interview was not included within the data analysis. The questions utilised for the interviews (Table I) were aimed at encouraging individual reactions and in-depth exchange of personal experiences. All discussions were facilitated by the principal researcher (HB) who also took field notes of non-verbal communication and emerging themes. Throughout the interviews the principal researcher (HB) contributed as minimally as possible to the discussion and only prompted where necessary to allow the participants to speak freely and avoid undue influence.

Table I Questions that guided individual responses

Opening question

Can you tell me a bit about yourself?

Introductory questions

Can you describe to me your work before the accident?

Can you describe to me any training you received that allowed you to perform your job?

What did you enjoy about your job training?

What types of opportunities were there to expand and progress your career?

Transition questions

Can you describe to me your expectations regarding returning to your job once you have recovered?

What are your perceptions regarding working in a job with a disability?

How do you think your work colleagues will perceive your return to work?

Key questions

How do you think that specific rehabilitation programs aimed at certain work activities would impact upon your return to work prospects?

Can you describe to me your injury and rehabilitation experience?

How do you think your experience will impact upon your ability to return to work?

Ending questions

Where do you see yourself in 3 years time?

Researcher gives a short overview of the purpose of the study to ensure that critical aspects have not been overlooked.

Is there anything else regarding your return to work prospects, rehabilitation experience or injury experience that you would like to share?

Thankyou for your time today.

Data Collection

Six face-to-face interviews were carried out between 5 January and 5 February 2008. All participants were given a pseudonym and interviewed individually on the ward for 30-40 minutes. No interviews interfered with medical procedures or treatment. Each interview was recorded on both a digital and cassette recorder to ensure accuracy for transcription. At the conclusion of the interview participants were asked if they would agree to have a follow up phone interview at six months post discharge. All participants agreed to be followed up.

Analysis

Each patient interview was audio-taped and digitally recorded to allow for ease of transcription. A qualified audio-typist transcribed all six interviews, and was provided with only the participant's pseudonym to prevent patient identification. The principal researcher (HB) then reviewed the interview transcripts and included the field notes that were made at the time of the interview where appropriate. The research supervisor (SR) who had not been present for the interviews independently compared the transcriptions to the tape and digital recordings to verify their accuracy. In the early stages of data analysis each transcript was read a minimum of five times and each recording was listened to a minimum of five times to ensure accuracy and reliability of the recorded data. It was identified during these early steps in the analysis of data transcription that data overload may occur as suggested by Miles and Huberman [11]. As such it was of great importance for the principal researcher (HB) to remain mindful with regards to the purpose of the study and ensure openness about aspects that were not previously expected. No computer package was used for this study. Effective data categorisation was achieved through collecting and sorting data into matrices under common themes. After further consideration of the participant transcripts and the audio/digital recordings, the matrices were further divided into sub-themes: Figure I represents the final stages of data analysis and indicates the key themes that arose across the individual interviews. The principal researcher (HB) then met with the research supervisor (SR) to discuss the key themes identified and ensure consistency and consensus of opinion. Once the principal researcher (HB) and the research supervisor (SR) had reached a reciprocal agreement on the themes emerging from each individual interview, important quotations that highlighted these themes were extracted.

Results

All six participants within this study were over the age of 18 years (ages ranged 22-61years). Five participants were male and one was female. Whilst two participants were involved within car accidents, the remaining four participants were involved within motorcycle accidents. This outcome was unforeseen by the research team, however this study population did not influence the research findings to a high degree. All the participants were inpatients at the Townsville General Hospital and had received physiotherapeutic treatment prior to the interview.

Return to work issues and expectations

It would seem that the participants in this study may not have fully understood the nature of their accidents or that they were not aware or educated regarding the extent of their injuries and the time it would take for them to heal. Some participants (three out of six) expressed beliefs that there were not any barriers present that would delay a return to their work. Worryingly, some patient comments may indicate a lack of patient understanding regarding returning to work with an injury and the impact an injury can have upon physical abilities.

Oh yeah, well, I should return straight into it. Evan (Line 84)

Just get back out there, start riding bikes and start meeting people again. Bill (Lines 86-87)

Aside from an apparent lack of understanding three out of the six participants within this study may have expressed positive views regarding their return to work prospects, in order to protect themselves from the stressors associated with financial and/or job security. Feelings of job and financial insecurity may play a crucial role between employees and employers as pathways of occupational re-entry are guided by both parties. Thus, adopting positive views may potentially affect a patient's healing and coping abilities. Whereas the possibility of added stressors regarding physical capabilities as well as coping with the aftermath of a horrific accident may negatively impact upon recovery and psychological well being.

Occupational re-entry

It was apparent that the majority (four out of six) of participants had not considered the impact that sustaining an orthopaedic injury may have upon their lives and their occupational identity. This finding is significant when attempting to draw an understanding from a participant's point of view of what an injury or disability means to them. A view commonly expressed by the group was that their rehabilitation would be easy and they would seamlessly fit back into employment if workplace employers enabled a timely return to work after discharge. Furthermore, from the data and interview process there seems to be a significant stigma attached to the term 'disability' by lay people. This term was seen by the participants of this study as a negative label which impacted upon a person's sense of worth, employability and ability to work as a productive member of the community.

It's not really much of a disability, it's just I'm injured now, but it's going to heal. The doctor has said I'll be right to go again, so I won't really have a disability after all... Evan (Lines 105-07).

In addition, it appeared that participants failed to recognise their physical limitations by pursuing 'positive' beliefs that would, in 'their eyes' enable a timely return to work despite sustaining, in some cases, injuries of a horrific nature.

Like my boss would take me back now and let me just sit in the corner so I can lend information. I think if your boss is happy with your employment history he will do everything he can in his power to get you back to that job. Bill (Lines 101-09).

From this and similar statements, it would seem that discrepancies do exist between an individual's perceptions and expectations of returning to work and the stringent economic status of today's business world. Financial viability from the employer's point of view as well as the RTA victims' physical status and timeframe for recovery must be taken into account when attempting to plan for a timely and safe return to work. Thus, from the participant's comments in this cohort, regarding occupational re-entry, it would seem that an imbalance between employer and employee mindsets may exist when negotiating a timely return to work after an RTA.

Rehabilitation and physiotherapy

The concept of rehabilitation seemed to be greatly misunderstood amongst this particular study population. As most of the participants were still coming to terms with their injury status, they may have felt that rehabilitation was not a necessary component of care. Some participants did not appear to understand the nature of physiotherapy as a profession. Which is problematic in understanding the roles and work physiotherapists do as well as the support they can offer clients to improve rehabilitation outcomes.

Whilst physios are good to get muscles moving in all the places and then places that have been immobilised longer, I don't think it's possible for them to know where you're at in your healing process. You know what I mean? I think it's a very personal thing. The same injury in two different people can take two different paths, you know, two different periods of time. Bill (Lines 163-69).

This statement may imply that Bill as a member of the general public and a key stakeholder within the health system, may lack understanding or appreciation of what physiotherapists as members of the rehabilitation team can achieve. His statement may also suggest poor understanding of the knowledge base that the profession holds with respect to pathology and healing processes. In contrast, the rehabilitation experience itself may have allowed some participants to gain an appreciation of their injury status as well as the impact it would have upon their lives.

Yesterday was the first time (for rehabilitation), and that was actually quite a learning curve on how messed up my leg is. Gavin (Lines 206-07).

From this response it appears again that some patients don't recognise their injury status until they try to mobilise and attempt seemingly simple tasks which may end up becoming extremely difficult to achieve or result in failure. It is important to consider that a client's physical status prior to the accident may also be indicative of an individual's response to physiotherapy. If an RTA victim is physically able, strong, flexible, mobile and physically fit prior to injury the physical and psychological challenges placed upon an individual's body may be lessened, as they are better equipped physically to cope with the stressors an injury poses upon one's bodily integrity.

I only find it challenging and frustrating because of my weight. Probably the biggest thing. Daniel (Lines 144-45).

Discussion

Statistics for developed countries indicate that the average person has a 1% chance of fatality and a 30% risk of injury from an RTA in their lifetime [12–13]. The study of phenomenology a qualitative methodological approach can contribute to the evidence-based practice within the area of health care for RTA victims. This is achieved through the use of interviews which allow an experience or story to unfold in a guided manner [14]. Data in the form of themes are then explored.

It is not uncommon for RTA victims to describe their experience as 'worrying' and a 'struggle' to move to find help from the site of the accident [15]. Many of the participants within this study alluded to feelings of 'worry' and 'fear' however they seemed to become closed off with respect to their actual accident experience. Reliving the accident experience may have been difficult for some perhaps because they encountered their RTA on rural/remote roads whereby the experience of the injury itself may have been compounded by the environmental factors of the injury such as how long the victim was waiting for help, geographic isolation, the time of day as well as the temperature of the environment [15]. Therefore the emotional or psychological impact of the accident and injury may have affected individual coping abilities to a greater extent due to the rural/remote location of the accident. Thus, it is both important and relevant

that therapists and health care workers consider the impact of the injury experience upon an individual as neglecting personal experiences may hamper an individual's recovery and possibly perceptions of rehabilitation and returning to work [15].

Levack and associates [16] suggest that understanding a patient's 'vocational identity' is critical when creating rehabilitation goals that fundamentally target their return to work prospects. It was identified from the literature and also from the patient interviews that perhaps more effective programs are needed to decrease the problems clients experience with regards to adjustment post RTA and recognition of their injury status. This finding implies that rehabilitation needs to deal with not only psychological aspects but also physical aspects [17–19]. For this cohort of participants some of the patients may even have been exhibiting signs of denial, as they appeared to disregard the severity of their injuries and the prospect of intense physiotherapy. Therefore, to better understand a patient's emotional and psychological status post RTA, rehabilitation professionals must take into account influencing factors such as the functional, emotional, social and professional profile of the client [20]. In doing so, promotion of individual coping abilities as well as developing patient understandings of their injury status can be achieved [20].

Veenstra and Hofoss [21] found that patients want to understand their condition as it helps them cope, especially during times of uncertainty. This desire for information was evident from this cohort of participants. Some patients expressed concern and frustration with the apparent 'lack' of information they were provided regarding their physical condition. Additionally once patients reach the active rehabilitation phase, it would seem that a new approach to patient education would be important and integral to the healing process [22]. Patients who are less informed regarding their injury status may pose a greater challenge to rehabilitation professionals as they may form their own viewpoints with respect to what they *should* and *should not* be doing [23]. This finding was supported within the patient interviews as some of the viewpoints expressed regarding physiotherapy portrayed not only a lack of understanding but also an air of defiance with respect to participation in therapy. However, it is not uncommon for the patient and practitioner to hold differing viewpoints on what the best treatment option is [23]. The reported imbalance may be due to the alarmingly high number of patients (nine out of ten) as identified in the studies of Laidlaw et al. [24] who do not receive adequate explanations of proposed treatments.

Therefore, it may be beneficial if brief interventions with the general public regarding not only physiotherapy but allied health as whole are carried out in order to create understanding and awareness amongst the community. The positive values of patient education should never be underestimated; if a patient has an improved understanding of what and why they are participating in rehabilitation programs, greater functional gains may be achieved.

Conclusion

The rehabilitation and return to work of orthopaedic road trauma victims is a complex area that is highly influenced by the characteristics of the patient, their occupation, the amount of patient education received as well as the degree of physical and psychological trauma the patient has sustained. This study used a qualitative phenomenological design to gain insight into the perceptions and expectations that a cohort of orthopaedic, RTA victims may have had with respect to their rehabilitation and return to work. From this study it is evident that physiotherapists and health care workers must ensure that patients are well educated and informed regarding the role of the health care workers, their injury status and the purpose of each treatment to improve patient compliance and thus, recovery. The value of patient centred care is paramount especially during the trialling times the rehabilitation period poses upon an individual.

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References

1. Veitch C, Sheehan M, Turner R, Siskind V, Pashen D. The economic, medical and social costs of road traffic crashes in rural North Queensland: A 5-year multi-phase study. 8th National Rural Health Conference; 2005 March 24; Alice Springs. Northern Territory.
2. Centre for Accident Research and Road Safety—Queensland (CARRS-Q). Rural and remote road safety research project: Five year crash and area profile of north Queensland. Queensland University of Technology 2006. Woolley T, Leal N, O'Connor E, Edmonston C, Veitch C, Turner R, Sheehan M, Siskind V.
3. Australian Broadcasting Corporation [Internet]. (2008). Region Records Most Queensland Road Deaths for 2006. [Data file]. 2008 [Cited 2008 Jan 24]. Available from: <http://www.abc.net.au/news/newsitems/200701/s1820481.htm>
4. Steine S, Finset A, Laerum E. A new brief questionnaire (PEQ) developed in primary health care for measuring patients' experience of interaction, emotion and consultation outcome. *Family Practice* 2001;18:410-418.
5. Pettersen KI, Veenstra M, Guldvog B, Kolstad A. The patient experiences questionnaire: Development, validity and reliability. *International Journal for Quality in Health Care* 2004;16:453-463.
6. Polgar S, Thomas SA. *Introduction to research in the health sciences*. 4th ed. Sydney: Elsevier Limited; 2000. p 3-92.
7. Richards L, Morse JM. *Readme first for a user's guide to qualitative research methods*. 2nd ed. Thousand Oaks, CA: Sage Publications; 2007. p 25-114.
8. McKinley WO, Seel RT, Gadi RK, Tewksbury MK. Nontraumatic vs. traumatic spinal cord injury: A rehabilitative outcome comparison. *American Journal of Physical Medicine & Rehabilitation* 2001;80:693-699.
9. Stevens RD, Bhardwaj A, Kirsch JR, Mirski MA. Critical care and perioperative management in traumatic spinal cord injury. *Journal of Neurosurgical Anesthesiology* 2003;15:215-229.
10. Morris PG, Prior L, Deb S, Lewis G, Mayle W, Burrow EB, Bryant E. Patient's view's on outcome following head injury: A qualitative study. *BMC Family Practice* 2005;6:30-36.
11. Miles M, Huberman A. *An expanded sourcebook: Qualitative data analysis*. 2nd ed. Thousand Oaks, CA: SAGE; 1994. p 55-89.
12. Haegi M. A new deal for road crash victims. *BMJ* 2002;324:1109-1110.
13. Charbotel B, Martin JL, Gadegbeku B, Chiron M. Severity factors for truck drivers' injuries. *American Journal of Epidemiology* 2003;158:753-759.
14. Greenhalgh T. Narrative-based medicine in an evidence based world. *BMJ* 1999; 318:323-325.
15. Santy J, Mackintosh C. A phenomenological study of pain following fractured shaft of femur. *Journal of Clinical Nursing* 2001;10:521-527.
16. Levack W, McPherson K, McNaughton H. Success in the workplace following traumatic brain injury: Are we evaluating what is most important? *Disability and Rehabilitation* 2004;26:290-298.
17. Gatchel RJ, Polatin PB, Kinney RK. Predicting outcome of chronic back pain using clinical predictors of psychopathology: A prospective analysis. *Health Psychology* 1995;14:415-420.
18. Franche RL, Kraus N. Readiness for return to work following injury or illness: Conceptualizing the interpersonal impact of health Care, workplace and insurance factors. *Journal of Occupational Rehabilitation* 2002;12:233-256.
19. Wetterhahn KA, Hansen C, Levy CE. Effect of participation in physical activity on body image of amputees. *American Journal of Physical Medicine & Rehabilitation* 2002;81:194-201.
20. Sagiv P, Shabat S, Mann M, Ashur H, Nyska M. Rehabilitation process and functional results of patients with amputated fingers. *Plastic Reconstructive Surgery* 2002;110:497-503.
21. Veenstra M, Hofoss D. Patient experiences with information in a hospital setting: A multilevel approach. *Medical Care* 2003;41:490-499.
22. Kramer A. Rehabilitation care and outcomes from the patient's perspective. *Medical Care* 1997;35:48-57.

23. Clarke P. Medical practices' sensitivity to patients' needs: Opportunities and practices for improvement. *Journal of Ambulatory Care Management* 2003;2:110-123.
24. Laidlaw T, Kaufman D, Macleod H, Sargeant J, Langille D. Patients' satisfaction with their family physicians' communication skills: A nova scotia survey. *Academic Medicine* 2001;76:77-79.

Presenter

Hallie Butcher graduated from James Cook University with a Bachelor of Physiotherapy with Honours in 2008. Hallie was part of the first cohort of students to graduate from the James Cook University discipline of Physiotherapy. The work presented in this paper was derived from work presented in her honours thesis.

Figure 1 Key themes and categories generated from interviews

